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AIRCREW CRITIQUE OF HIGH-G CENTRIFUGE TRAINING: PART II. "COMMENTS ON THE G-AWARENESS BRIEFING"

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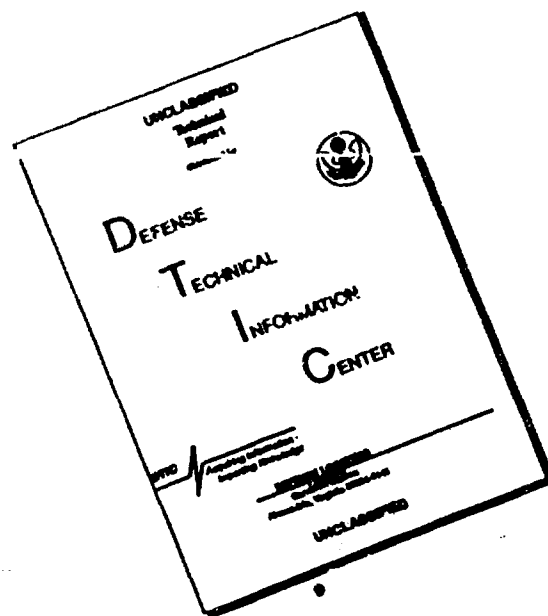
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ABSTRACT

The Naval Air Development Center initiated its centrifuge high-G training program for aircrew in late 1988. This report is a continuation of previous reports that review the results of training the first 525 aircrew. Specifically, the response of aircrew to the post-training critique question "Comments on the G-awareness briefing" is reviewed and analyzed. The six major points of importance concerning the G-awareness briefing portion of the training program include (1) a clear, concise format, (2) "fighter aviation" physiology only, (3) strong operational orientation, (4) credibility of the instructor, (5) maximum utilization of videotape incidents/accidents, and (6) dedicated classroom facilities/educational environment. Fighter aircrew have given extremely favorable ratings to the current G-awareness briefing, the vast majority recommending no changes whatsoever. Any modification should therefore be reviewed very critically to ensure a continued high level of fighter-attack aircrew acceptability.

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INTRODUCTION

The Naval Air Development Center (NADC) initiated high G centrifuge training for naval aviators assigned to fighter-attack aircraft late in 1988. The human centrifuge/dynamic flight simulator of NADC was utilized for the training. We previously described the general results of the aircrew training (1). In Part I of the review of aircrew critiques we described the program goals, the post-training questionnaire (Appendix I) and a review of what aircrew considered the best part of the high-G training program (2). This report covers only what the aircrew responses were concerning the G-awareness briefing. The responses in Appendix II were not all inclusive from the 525 aircrew who completed the critiques. Only responses which contained information that could be of use to further our efforts to serve fighter aircrew through an enhanced G-awareness briefing are included in this report. We were very gratified by the numerous favorable expletives provided by the aircrew (such as fantastic, super, outstanding, excellent, good, and superb); however, we have not included these in Appendix II when they were given alone. The data we reviewed is therefore only that which provided insight regarding the specific aspects of the G-awareness briefing that could be further strengthened. Only 10 aircrew failed to complete critiques; this was due to an early departure from the training prompted by awaiting naval air transportation. A full appreciation of how the G-awareness briefing fits into the overall high-G training program, along with its importance, requires review of previous reports (1,2). We received no overall negative critiques from any USN, USMC, or USAF aircrewman. In fact, the vast majority of the aircrew critiques would suggest that minimal if any changes whatever should be made to the G-awareness briefing.

THE G-AWARENESS BRIEFING

The G-awareness briefing was initially very similar to that previously developed to train USAF aircrew (3). The G-awareness briefing is the given to aircrew as the first part of the high-G training program and lasts approximately 1 hour. Based on review of aircrew critiques following each class, modifications were continually made to enhance the briefing. Every effort was also made to tailor each briefing and training session toward the specific mission of the aircrew in each class (F-14, F-18, A-7, F-16 or other aircraft). The main objectives of the G-awareness briefing are listed in Table I. We frequently (and preferably) get aircrew from a specific squadron in for a training class. Since they all fly the same aircraft, it enhances the ability to focus on a specific weapon system. Getting a class composed of a single squadron has many advantages, not just in terms of tailoring the G-awareness briefing to them. Although all aspects of the briefing are critical, we consider the very top priority of the G-awareness briefing to be the anti-G straining maneuver (AGSM). We specifically encourage aircrew to use the "HOOK" maneuver for the reasons we have described elsewhere (4). One of the major results of the aircrew feedback, both formal (as provided in the critiques) and informal, has been the exceptionally favorable attitude of aircrew toward the "HOOK" maneuver (2). It should be stressed that the "HOOK" maneuver is not a new method of performing the AGSM; instead it is a new and extremely effective method of teaching the AGSM. We prefer not giving a specific name to the AGSM (M-1/L-1 terminology is an evident source of confusion for aircrew). The "HOOK" maneuver is just what you can do when you perform the respiratory component of the AGSM and therefore is an easily remembered mnemonic. Just say "HOOK!" also facilitates coaching during the very short centrifuge runs. This type of AGSM is not the only effective method to enhance tolerance to $+G_z$ -stress. A handout covering all the material in the G-awareness briefing, along with additional information relating to $+G_z$ -stress is given to all aircrew trainees upon arrival and prior to the G-awareness briefing. In addition, a physical conditioning handout is provided to every trainee (5).

COMMENTS ON THE G-AWARENESS BRIEFING

The information included in Appendix II was taken from the specific critique question requesting "comments on the G-awareness briefing." The aircrew responses could be roughly grouped into 6 major

categories as shown in Table II. Once again, it should be stressed that the overwhelming majority of aircrew gave the G-awareness briefing very high marks exactly as it was delivered. As previously described, some individuals considered the G-awareness briefing the best part of the high-G training program (2).

It is a unique privilege to be able to personally interact with the aircrew we, in fighter aviation medicine, continuously strive to serve and have them respond that your efforts are directly enhancing their combat capability and flight safety. Responses such as comment number 18 from a 29 year old F/A-18 pilot: "Super brief. I believe I walked away with a better anti-G straining maneuver", comment number 44 from a 38 year old A-7E pilot: "Excellent brief, I finally understand G-LOC"; comment number 70 from a 44 year old F-16 pilot: "Fantastic - the first time it has been presented in a way I understood", and comment number 7 from a 37 year old F-16 pilot: "Excellent - no bullshit or frills just fact - a rare thing these days" were all very gratifying. They indicated that the established goals of the G-awareness briefing listed in Table I were met and even exceeded.

The importance of having a highly credible briefer with an extremely sound operational background cannot be overemphasized. The initial interaction with the aircrew trainees, and therefore their first impression of the program, is the responsibility of this individual. The briefer sets the pace for the entire program. A sound understanding of acceleration physiology, fighter aviation medicine, tactical fighter operations, and centrifuge operations are some of the critical qualifications of the ideal briefer. The importance of carefully selecting the briefer for the G-awareness briefing was reflected in the previous critique analysis concerning what the best part of the G-training program was (2). Comment number 23 from an F-14A pilot: "Very interesting - good to be briefed by someone with so much background in fighter aviation"; comment number 24 from a 30 year old F-16 pilot: "Very credible brief and discussion not in condescending medical-ese but on aircrew level", comment number 46 from a 29 year old F/A-18 pilot: "Credibility of the DOC"; and comment number 49 from a 29 year old F/A-18 pilot: "Excellent!! Did not insult the pilots' intelligence like some physiologists can do. To the point! GOOD JOB" all attest to the care that must be exercised in selection of the G-awareness briefer. It is our opinion that the optimum briefer should be a veteran fighter-attack aviator who has been thoroughly trained by an acceleration medicine subspecialist and has spent a period of time working with acceleration scientists at the centrifuge. The G-awareness briefers' job is not over upon completion of the formal didactics. They should remain with the aircrew trainees throughout the training, covering as many fighter aviation medicine and physiology points as possible, reinforcing the previously covered ideas, gathering up-to-date operational information from fleet flying operations, obtaining informal aircrew input from the trainees, establishing a long-term fighter crew liaison that will ensure timely future feedback from flight operations (including possible G-related incidents/mishaps) and discussing recent research and development thrusts with the fighter crews. Gaining the full confidence of the aircrew pays long-term benefits for the program, fighter-attack operations, and naval aviation. The G-awareness briefer is the critical focal point of all these activities.

A significant number of aircrew specifically did not consider that the G-awareness briefing should be altered in any way whatsoever: comment number 16 from a 25 year old F/A-18 pilot: "Briefing was excellent. Just the right amount of depth and theory as well as application" and comment number 34 from a 28 year old NFO (non-flying officer): "Very informative - NO CHANGES." It was crystal clear that the length of the briefing was of major importance to the aircrew; comment number 27 from a 38 year old F-16 pilot: "Did not take 1 hour of info and make 8 hour briefing"; comment number 37 from a 25 year old F/A-18 pilot: "Real good - short and to the point"; comment number 46 from a 40 year old A-7E pilot: "Outstanding just the right length"; comment number 66 from a 27 year old F-14A RIO (radar intercept officer): "A good brief! Timed just right - not too long, not too short"; comment number 2 from a 24 year old F/A-18 pilot: "Perfect! No superfluous information as is usually the case"; and comment number 9 from a 29 year old F-15 pilot: "Excellent. Short to the point and what is needed to know." The G-awareness briefing, for a single-day training program, should remain just what it is titled... a

BRIEFing. There is no question that a tremendous amount of information always competes for a specific time niche in the briefing. For instance, physical conditioning for the aircrew could take up more than an hour (comment number 72). Every moment of precious aviator time should be filled with only the most critical, operationally applicable information. All additions or changes to the briefing should undergo critical and rigorous review.

Without question, the highlight and absolute "clinger" that brings home the absolute need for the entire G-training program, is the utilization of head-up-display (HUD) videotapes of G-related incidents and (unfortunately) mishaps: comment number 10 from a 26 year old F-14 pilot "The HUD tapes were great - if more incidents and mishaps exist - show 'em - they are more effective than statistics", comment number from a 25 year old F-14 NFO "Excellent brief - gave all the information clearly and to the point. Excellent videotapes of G-LOC incidents", comment number 40 from a 34 year old F-15 pilot: "More actual G-LOC incidents, messages, tapes to get pilots attention", and comment number 56 from a 25 year old F-14A+ pilot: "Good videotape - the more the better". This includes the use of videotapes for illustrating what G-LOC is, how to perform a good "HOOK" AGSM, and what the upcoming centrifuge exposures will be like. comment number 48 from a 25 year old A-7E pilot "Nice use of videos right and wrong ways [to do AGSM] and consequences", comment number 5 from a 25 year old F/A-18 pilot: "Very thorough, example videos very effective in showing the symptoms", and comment number 41 from a 28 year old A-6 NFO: "Show videotape of whole sequence in the ball - first couple of guys are guinea pigs to a certain extent."

The importance for every shred of the material being oriented to the fighter aviator and the operational environment cannot be over-emphasized. comment number 28 from a 43 year old A-7 pilot "Outstanding. Fighter pilot level", comment 63 from a 37 year old A-7E pilot: "Super, I understood everything. It was right on my level", and comment number 64 from a 43 year old F-4E pilot "Outstanding - a good carry over to aircraft."

The major points that we received and took immediate action to correct were not numerous. The one or two word responses on the critiques that were not listed separately in Appendix II contained no adverse or negative statements whatsoever. From over 500 aircrew, at most only four of the comments were not fully acted upon: comment number 68 from a 39 year old F-16, A-4 pilot "I thought the briefing was too long, but they are probably about right for a new guy", comment number 60 from a 32 year old F-14 pilot: "Good - no discussion of effects of negative 'g'", comment number 1 from a 34 year old F/A-18 pilot: "Outstanding! I would suggest we get better statistics on Navy G-LOC vice Air Force. We don't know enough about our own people"; and comment number 22 from a 39 year old A-4 pilot "Too much emphasis on death and debilitation, we all know and live with the consequences every day". The vast majority, in fact all but a single individual (comment number 68), considered briefing to be just the right length, therefore no change was made based on this comment. Although it would be nice to provide much more information about a wide variety of inflight physiologic effects, perhaps including something on negative G (comment number 60), it is not important enough nor a goal of the training program and is not covered in the briefing. Comment number 22 which refers to G-LOC mishap HUD tapes does involve the actual loss of life; however, that unfortunately is reality and must be recognized as one, if not the major, driver for the G-training program. Exceeding operational +G_t-tolerance can lead to G-LOC, injury, and death. We agree whole-heartedly with comment number 1 which suggests "We don't know enough about our own [naval aviation] people." During the Naval Research Council 1990 Summer Research Study, a major finding confirmed that the U.S. Navy documentation of fighter aviation incidents and mishaps was grossly lacking. This included G-LOC and +G_t-related injuries. Since the data and evidence does not exist, we have not been able to present it as part of the G-awareness briefing. We have fortunately been able to secure and use some HUD videotape G-LOC episodes from Navy and Marine fighter-attack aircraft and now utilize them in the program. Securing videotapes from fleet aircraft and operational incidents and accidents is the responsibility of the whole of naval aviation. Collection of this vital information should be centralized and provided to the G-training

program. Although the facilities at NADC do not provide an optimal layout for a private classroom to deliver the G-awareness briefing, we very carefully ensure the sequestration of the aircrew during the entire G-training program. Even a rare instance of interruption of the G-awareness briefing is intolerable and is instantly noted by the aircrew (comments number 42 and 57)

DISCUSSION AND CONCLUSIONS

The G-awareness briefing is an integral part of the aircrew high-G training program. It is evident that the G-awareness briefing utilized at NADC gets exceptionally high ratings from fighter-attack aircrew. We are keen to keep it updated and eager to include as much naval aviation specific information in it as is available. This is partly the responsibility of the whole of naval aviation to provide such timely information. Much more emphasis should be placed through appropriate authority to gain such operationally applicable information. It is evident such emphasis which could further enhance aviator safety is currently lacking. The major points concerning aircrew critique of the G-awareness briefing included keeping the briefing concise, strongly operationally oriented, delivered in a specific classroom facility by a highly credible individual and making maximum use of videotape instructional media.

Although the vast majority of aircrew did not recommend any change be made to the G-awareness briefing, we believe continual effort should be expended to maintain a unique vitality for the program. The opportunity and forum provided by high-G training program to interact with fighter-attack aviators is a tremendous opportunity for the fighter aviation medicine and physiology communities to enhance their support to fighter operations. Extreme care should be exercised if major changes are made to the content of the briefing or overall program in light of the strong positive response of aircrew to the current program. It is evident that the NADC aircrew high-G training program is an extremely successful program that directly supports fleet operations. There is every indication that the program directly enhances flight safety, combat capability, and mission effectiveness.

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3. Gillingham KK, Fosdick JP. High-G training for fighter aircrew. *Aviat. Space Environ. Med.* 1988; 59:12-19.
4. Whinnery JE, Murray DC. Enhancing tolerance to acceleration ($\pm G_z$) stress: the HOOK maneuver. Naval Air Development Center Technical Report No. NADC-90088-60, Warminster, Pennsylvania, 20 Aug 90.
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TABLE I. THE MAJOR GOALS OF THE G AWARENESS BRIEFING

1. LOGIC AND EVOLUTION OF REASONING FOR INITIATING AIRCREW HIGH-G TRAINING
2. PHYSIOLOGIC EFFECTS OF +G_i-STRESS
3. TOLERANCE TO +G_i-STRESS
 - a. CARDIOVASCULAR +G_i TOLERANCE
 - b. NEUROLOGIC +G_i TOLERANCE
 - c. LEVEL +G_i TOLERANCE
 - d. DURATION +G_i TOLERANCE
 - e. OPERATIONAL +G_i TOLERANCE
4. VIDEOTAPE REVIEW OF INFLIGHT +G_i INCIDENTS ACCIDENTS
5. THE G-LOC SYNDROME (LIMITING EFFECTS OF +G_i-STRESS)
6. ADVERSE MUSCULOSKELETAL (NECK/BACK) EFFECTS
7. PROTECTION AGAINST +G_i-STRESS
 - a. THE "HOOK" ANTI-G STRAINING MANEUVER
 - b. EQUIPMENT
 - c. PHYSICAL CONDITIONING
 - d. PHYSIOLOGIC AND MUSCULAR WARM-UP
 - e. +G_i-ACCLIMATION
8. SCHEDULE OF EVENTS AND PROCEDURES FOR THE CENTRIFUGE RUNS
 - a. ONE-ON-ONE COACHING
 - b. ANTI-G STRAINING MANEUVER TRAINING COMPUTER "HOOKMASTER"
 - c. SCHEDULING AND RUNS
 - d. ELECTROCARDIOGRAPHIC MONITORING
 - e. DEBRIEFING
9. FUTURE TRAINING PROGRAM MODIFICATIONS (IMPORTANCE OF CRITIQUES)

TABLE II THE SIX MAJOR FACTORS CONCERNING THE
G-AWARENESS BRIEFING GIVEN BY FIGHTER CREWS

- 1 CLEAR, CONCISE FORMAT (The shorter the better)
- 2 "FIGHTER AVIATION" PHYSIOLOGY
- 3 OPERATIONAL ORIENTATION
- 4 CREDIBILITY OF BRIEFER
- 5 VIDEOTAPE INCIDENT ACCIDENT IMPORTANCE
- 6 CLASSROOM FACILITIES ENVIRONMENT

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APPENDIX I G TIP CRITIQUE

YOUR INPUT IS EXTREMELY IMPORTANT TO HELP IMPROVE G TIP. YOUR COMMENTS WILL HELP THE NEXT GROUP OF AVIATORS AND WILL SERVE TO SHAPE THE FINAL G TIP PROGRAM WHEN A DEDICATED TRAINING FACILITY IS COMPLETED. FAVORABLE COMMENTS ARE AS IMPORTANT AND HELPFUL AS CRITICISMS. PLEASE HELP US TO IMPROVE OUR PROGRAM FOR YOU! THANK YOU!!!!

1. COMMENTS ON TRAVEL, QUARTERS, AND TRANSPORTATION

2. COMMENTS OF "G" AWARENESS BRIEFING

3. COMMENTS ON CENTRIFUGE TRAINING

4. COMMENTS ON FACILITIES

5. COMMENTS ON PERSONNEL

6. WHAT WAS THE BEST PART OF THE G TIP PROGRAM (IF ANY)?

7. WHAT CAN WE CHANGE TO BETTER SERVE YOU?

8. GENERAL COMMENTS

IN ORDER TO COMPARE YOUR NEEDED COMMENTS WITH OTHER AVIATORS, WE ASK THAT YOU FILL OUT THE FOLLOWING AND ADD ANY FURTHER COMMENTS THAT YOU FEEL IS IMPORTANT TO THIS PROGRAM.

AGE: AVIATION STATUS (PILOT, RIO, NFO) CURRENT A/C

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DISPLAY QUALITY

DID THE DISPLAY EXHIBIT ANY CHARACTERISTICS DETRIMENTAL TO THE TRAINING? (I.E., FLICKER, NOISE, INADEQUATE RESOLUTION, SMALL FIELD OF VIEW)

THE DISPLAY IN THIS TRAINING WAS A REAL IMAGE LOCATED ON A CRT SCREEN. IT DOES NOT PROVIDE THE DEPTH PERCEPTION CUES OF A VIRTUAL IMAGE DISPLAY SYSTEM USED ON MOST FLIGHT TRAINERS. WOULD A VIRTUAL IMAGE DISPLAY SYSTEM ADD TO THE EFFECTIVENESS OF THIS TRAINING? (PLEASE RESPOND BY COMPARING A PARTICULAR FLIGHT TRAINER WHERE POSSIBLE.)

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APPENDIX II. AIRCREW RESPONSES TO CRITIQUE QUESTION: "COMMENTS ON THE G-AWARENESS BRIEFING"

| <u>COMMENT NUMBER</u> | <u>AGE (YRS)</u> | <u>AVIATOR STATUS *</u> | <u>AIRCRAFT</u> | <u>COMMENTS **</u> |
|---------------------------|----------------------|-----------------------------|-----------------|--|
| 1. | 34 | | F/A-18 | Outstanding! I would suggest we get better statistics on Navy G-LOC vice Air Force. We don't know enough about our own people. |
| 2. | 24 | | F/A-18 | Perfect! No superfluous information as is usually the case. |
| 3. | 41 | | F-18 | Superior; concise, to the point, well scripted and presented. Effective media. |
| 4. | 31 | | A-4/F-16 | Best gouge I've seen. |
| 5. | 25 | | F/A-18 | Very thorough, example videos very effective in showing the symptoms. |
| 6. | 31 | | F-16/A-4 | Super. Saw plenty of what to do and not to do. |
| 7. | 37 | | F-16 | Excellent - no <u>BULLLSHIT</u> or <u>FRILLS</u> just fact - a rare thing these days. |
| 8. | 35 | | F-16 | Videotape this and send to units. |
| 9. | 29 | | F-15 | Excellent. Short to the point and what is needed to know. |
| 10. | 26 | | F-14 | The HUD tapes were great - if more incidents and mishaps exist - show 'em - they are more effective than statistics. |
| 11. | 35 | | F-16 | Absolutely outstanding! Clear, concise, complete. |
| 12. | 33 | | A-7E | Really good - thorough but brief. |
| 13. | 28 | | F/A-18 | Excellent brief, covered all material and to the point. |
| 14. | 26 | | F-18 | Excellent, short and very informative. |
| 15. | 29 | | F-16N | Outstanding! Covered lots of pertinent points. Direct and to the point. |
| 16. | 25 | | F/A-18 | Briefing was excellent. Just the right amount of depth and theory as well as application. |
| 17. | 29 | | F/A-18 | Excellent - learned a lot/things I should have been taught a long time ago. |
| 18. | 29 | | F/A-18 | Super brief. I believe that I walked away with a better anti-G straining maneuver. |
| 19. | 27 | | A-73 | Outstanding and thorough. |
| 20. | 39 | | A-4/F-16 | Excellent and to the point. |

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| <u>COMMENT NUMBER</u> | <u>AGE (YRS)</u> | <u>AVIATOR STATUS</u> | <u>AIRCRAFT</u> | <u>COMMENTS</u> |
|---------------------------|----------------------|---------------------------|-----------------|---|
| 21. | 25 | NFO | F-14 | Excellent brief - gave all the information clearly and to the point. Excellent videotapes of G-LOC incidents. |
| 22. | 39 | | A-4 | Too much emphasis on death and debilitation, we all know and live with the consequences every day. |
| 23. | 28 | | F-14A | Very interesting - good to be briefed by someone with so much background in fighter aviation. |
| 24. | 30 | | F-16 | Very credible brief and discussion not in condescending medical-ese but on aircrew level. |
| 25. | 27 | | F-14 | Good! Covered essential details without being long-winded. |
| 26. | 24 | | F-14 | Good brief. The "hook" method is very effective. |
| 27. | 38 | | F-16 | Did not take 1 hour of info and make 8 hour briefing. |
| 28. | 43 | | A-7 | Outstanding. Fighter pilot level. |
| 29. | 46 | | A-7 | Concise and to the point. Important and valid points covered. |
| 30. | 34 | | A-10 | To the point. No extraneous stuff. |
| 31. | 48 | | A-10 | Informative, to-the-point, no B.S. |
| 32. | 40 | | A-10 | Casual, brief, low-threat - very informative and organized. |
| 33. | 31 | | F/A-18/A-6 | Good brief - straight forward. |
| 34. | 28 | NFO | A-6 | Super! Concise yet comprehensive. |
| 35. | 30 | | F-5/A-4 | <u>Outstanding brief!</u> It was not too long as is usually the case. |
| 36. | 31 | | F/A-18 | Superb briefing. Maximum operational orientation. |
| 37. | 25 | | F/A-18 | Real good - short and to the point. |
| 38. | 25 | | F/A-18 | Outstanding brief that was quick and to the point and covered all necessary material. |
| 39. | 28 | | A-6 | Super! Where have you been? |
| 40. | 34 | | F-15 | More actual G-LOC incidents, messages, tapes to get pilots attention. |
| 41. | 28 | NFO | A-6 | Show videotape of whole sequence in the ball - first couple of guys are guinea pigs to a certain extent. |
| 42. | 22 | | F-14 | Should have a separate briefing room away from everyone else. |
| 43. | 28 | NFO | F-16/A-4 | Very informative - NO CHANGES. |

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| COMMENT NUMBER | AGE (YRS) | AVIATOR STATUS | AIRCRAFT | COMMENTS |
|-------------------|--------------|-------------------|----------|--|
| 44. | 38 | | A-7E | Excellent brief, I finally understand G-LOC. |
| 45. | 29 | | F/A-18 | Credibility of the DOC. |
| 46. | 40 | | A-7E | Outstanding just the right length. |
| 47. | 38 | | F-16N | Extremely outstanding. Perfect lead into the ride. Concise and pertinent. Great information. |
| 48. | 25 | | A-7E | Nice use of videos right and wrong ways and consequences. |
| 49. | 27 | | F/A-18 | Excellent!! Did not insult the pilots intelligence like some physiologists can do. To the point! GOOD JOB. |
| 50. | 28 | | A-7 | Very good. Best brief on this subject yet. |
| 51. | 25 | | F-14 | Real good lecture and video. Esp. videos of mishaps caused by G-LOC. |
| 52. | 24 | | F-14 | Training that follows the lecture while its fresh on your mind. |
| 53. | 26 | | F-14A | Never heard the "HOOK" method before and it works well. |
| 54. | 28 | | F-14 | Good lecture, not too long, very informative. |
| 55. | 28 | | F-16/A-4 | Good job, remember to try to bring all the information down to what is important to a pilot and where he might use this information. |
| 56. | 25 | | F-14A+ | Good videotapes - the more the better. |
| 57. | 27 | | F-14A | Don't allow people to saunter on through the briefing room. |
| 58. | 35 | | A-4 | Very thorough - as concise as possible. |
| 59. | 28 | | F/A-18 | Good brief! Concise and to the point - great overview. |
| 60. | 32 | | F-14 | Good - no discussion of effects of negative "g". |
| 61. | 25 | | F-14 | Nice and simple, just what you need to know - not boring as is usual for this type of thing. |
| 62. | 24 | | F-14 | I've had all the lectures before but they were a good refresher. |
| 63. | 37 | | A-7E | Super, I understood everything. It was right on my level. |
| 64. | 43 | | F-4E | Outstanding - good carry over to aircraft. |
| 65. | 26 | | AV-8B | <u>Very good</u> , prepares chimps on what they will experience. |
| 66. | 27 | RIO | F-14A | A good brief! Time just right - not too long, not too short. |

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| <u>COMMENT NUMBER</u> | <u>AGE (YRS)</u> | <u>AVIATOR STATUS</u> | <u>AIRCRAFT</u> | <u>COMMENTS</u> |
|---------------------------|----------------------|---------------------------|-----------------|---|
| 67. | 26 | | F-14 | Outstanding, good content, well delivered, good pace. |
| 68. | 39 | | F-16/A-4 | I thought the briefing was too long, but they are probably about right for a new guy. |
| 69. | 35 | | A-4/F-16 | The best most logical brief on the subject I've received. |
| 70. | 44 | | .6 | Fantastic - first time it has been presented in a way I understood. |
| 71. | 42 | | F-16 | Excellent - thank God its a one time deal. |
| 72. | 45 | | F-16 | A little more on physical conditioning. |

* NOTE (1): The majority of comments on this question were single expletives like "OUTSTANDING, SUPERB, GREAT, EXCELLENT, PERFECT, GOOD, etc." No negative comments other than those listed were received or omitted.

** NOTE (2): Where "AVIATOR STATUS" is not listed it is pilot.

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